

INSECTS IN MONTANA

Leafcutter Bees

Alfalfa leafcutter bees are used to improve pollination of alfalfa for seed production. The female bees cut circular pieces of leaves, which they use to line any tubular structure of the right size to create cells. They then provision each cell with a ball of pollen and some nectar, and lay an egg on the mass, after which they seal the end of the cell with additional leaf pieces. Alfalfa seed producers provide tubes, and shelters for the bees. Additional information on leafcutter bees can be found at <http://scarab.msu.montana.edu/alfalfaseed/> or <http://www.loganbeelab.usu.edu/>.

The Department of Agriculture assists alfalfa seed growers in maintaining quality of their leafcutter bees through x-ray testing of the bee cells. This service, provided for a small fee, consists of sub-sampling a submitted sample, x-raying it, and examining the resulting films to determine the number of cells containing live larvae. The number of cells containing dead larvae, as well as an assessment of what may have caused their death, and cells containing unconsumed pollen balls are also counted. The growers receive a report detailing what was found in their sample, which can be used to determine if purchasing additional cells from an outside source will increase pollination in their fields. This report can also be used as a guide to change management practices to reduce various causes of mortality in the immature bees.



